

CONTRIBUTIONS TO OUR KNOWLEDGE OF THE FLORA OF
NEW SOUTH WALES.

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Proteaceae.

GREVILLEA SHIRESSII. n. sp.

Frutex gracilis, 2-4 m. altus, ramulis novellis hirsutis; ramis angulatis; foliis anguste-lanceolatis, acuminatis, plus minusve trinervis, 8-16 cm. longis, 2-4 cm. latis; racemis axillaribus, floribus 5-8 pallide-violaceis; pedicellis gracilibus 12-15 mm. longis; perianthio lato plus minusve gibberoso, lobis linearibus apicibus connatis; stylo perianthium excedente, 10-15 mm. longo; ovario glabro, stipitato; fructo oblique-cylindrico, costato, vel sulcato, cum stylo pedicelloque 5 cm. longo, 7-9 mm. lato; seminibus lineari-ovatis marginibus revolutis 10-12 longis, 3 mm. latis.

Slender, graceful shrubs, 6-25 feet high, glabrous, except the minute shoots which are infested with pale, rufous, silky hairs; branchlets angular or compressed. Bark slightly rough, reddish-brown throughout. Leaves narrow, lanceolate, terminating in a rather long curved point, somewhat triplinerved, venulose on both surfaces, undulate, shining above, dull and much paler underneath, the midrib prominent on both sides, the intramarginal vein distant from the edge, giving the leaf a triplinerved appearance, lateral veins distinct, forming an angle of about 45° with the midrib; the nerve-like margins diminishing into the moderately short, compressed petiole, 8-16 cm. long, 2-4 cm. broad. Inflorescence axillary, forming short racemes of 5-8 flowers, glabrous, except the common peduncle, which is infested with minute, deciduous, silky hairs. Flowers pale violet to greenish, tinged with pale purple-brown; pedicels slender, terminating in a linear, lanceolate, dilated green, persistent bract-like expansion which extends to the fissure of the corolla, 12-15 mm. long, the dilated portion 5-8 mm. long. Buds obliquely clavate, inflated in the lower half. Corolla broad, somewhat gibbose, the segments linear, their apices connate, orbicular, the broad basal portion minutely glandular, hispid inside. Style exceeding the corolla, 10-15 mm. long, pale green, somewhat obscurely striate, the striae extending into the stipes. Stigmatic disc oval, apiculate, 2.5 mm. long, 1.5 mm. broad. Ovary glabrous, stipitate, the stipes purple-brown, and nearly as long as the style. Fruit obliquely cylindrical, pale brown, with 8-10 faint longitudinal lines or ridges, including the style and stipes, 5 cm. long, 7-9 mm. broad in the middle. Seeds narrow-ovate, rather acute at both ends, the margins revolute, forming ventral surface, the back convex, marked with three or more faint lines, 10-12 mm. long, about 3 mm. broad.

Description of Seedlings.—Hypocotyl slender, slightly compressed, 3-5 cm. long. Cotyledons obovate or oblong, hastate, thick and veinless, dark green, 10-13 mm. long, 4-5 mm. broad. First pair of leaves sessile, narrow lanceolate, with a slightly curved mucro, attenuated at the base, the lamina reaching to the stem, obscurely penninerved, light green. Stem slightly angular or compressed; the growing point tipped with rufous, silky hairs. Out of three seedlings examined, the first leaves were alternate on two, and opposite on the other.

Range.—So far the species has only been found at Mullet Creek, Hawkesbury River, about 1 mile northwest of Wondabyne railway platform, 40 miles by rail north of Sydney. It extends from the head of the salt water of Mullet Creek, as far as the northern arm, a distance of about a mile and a quarter. (D. W. C. Shires and W. F. Blakely, 24/12/1922.)

Named in honour of David William Campbell Shires, my friend and companion on many botanical excursions during the last fourteen years.

G. Shiresii is an attractive looking shrub, with light green, undulating leaves, and it seems to belong to section *Lissostylis*, but it does not appear to have any very close affinities amongst the Eastern species, and for the present it is placed next to *G. oleoides* Sieb., because of its long leaves.

Tremandraceae.

TETRATHECA SHIRESSII, n. sp.

Caulis debilis, teres, glaber, vage ascendens ad 3-9 dm. ramis paucis; folia rara, sessilia vel brevi-petiolata, lineari-lanceolata, quasi minutis glandulis denticulata, inferiora rara alternata, 10-25 mm. longa, 3-4 mm. lata, superiora 3-4 in verticillo; flores axillares et terminales, pedicellis curvatis, 10-20 mm. longis, sepalis 4, lanceolatis, 4 × 2 mm.; petalis 4, erubescens angusto-lanceolatis, 10 × 4.5 mm.; staminibus 8, antheris quadrangularibus, ovario glanduloso-pubescente, stylo simplice, terete, capsula cuneata, minute glanduloso-pubescente, 6-8 × 5 mm.

A weak scrambling undershrub, 1-4 feet high, or frequently prostrate, glabrous except for a minute glandular vestiture on the nascent parts; internodes 3-10 cm. long; leaves few, very variable, rather distant, sessile or shortly petiolate; the lower ones opposite, and usually in whorls of three, linear lanceolate to elliptical-lanceolate, paler underneath, the margins recurved, and minutely glandular-denticulate, 10-20 mm. long, 3-4 mm. broad; upper leaves usually in pairs, linear, acute, straight or curved, 10-25 mm. long, 1-4 mm. broad; flowers axillary and terminal, solitary or in pairs, on slender, curved, slightly dilated pedicels, 10-20 mm. long; sepals 4, dark purple-brown, lanceolate, one-nerved, 4-5 mm. long, 2 mm. broad; petals 4, light pink, narrow-lanceolate, 10-15 mm. long, 4-5 mm. broad, or one or two slightly broader than the others; stamens 8; filaments about 1 mm. long; anthers somewhat quadrangular, linear-oblong, minutely hispid along the angles, dark coloured or nearly black, except the yellow top; ovary glandular-pubescent, shorter than the anthers; style simple, terete, nearly 3 mm. long, the lower half pink, the upper half white; stigma very small, scarcely perceptible; capsule cuneate-ovate, minutely glandular-pubescent, and somewhat viscid, slightly venulose, 6-8 mm. long, 5 mm. broad; seeds pubescent, almost triangular, 3 mm. long, with a white caruncle about 1 mm. long.

Range.—Heathcote, J. Foster; Kariang Trig., three miles northwest of Wondabyne, Hawkesbury River district; very common over a wide area. It grows in all kinds of situations, sometimes from the crevices of bare rocks, in hard, dry

sandstone rubble, in swampy and semi-swampy land, and in thickets of *Angophora cordifolia*. In the latter situation it scrambles up through the *Angophora* to a height of five feet. D. W. C. Shiress and W. F. Blakely, the Type; on the east side of Sugarloaf Trig., and at the head of Patonga Creek; Gosford district, J. Foster.

Among the New South Wales species, *T. juncea* Sm., appears to be its nearest affinity, from which it differs greatly in size and habit, in the long terete branches, more variable leaves, especially the upper ones and larger flowers with their longer, filiform pedicels.

Araliaceae.

ASTROTTRICHA CRASSIFOLIA, n. sp.

Fruticulus virgatus 6-12 dm. altus, ramis juvenilibus floribusque tomento brevo incano vel ferrugineo vestitis, ramis glabrescentibus; foliis alternis, breviter petiolatis, erectis, rigidis, lineari-oblongis valde obtusis, crassis, canaliculatis, supra laevibus nitidisque, subtus tomentosus marginibus valde revolutis, 2-5 cm. longis, 3 mm. latis; paniculis angustis, terminalibus vel in axilibus superioribus; floribus breviter pedicellatis, 4-14 in umbellis; alabastris clavatis, pedicellibus, crassis, quam flores brevioribus; calycis lobis prominentibus, petalis reflexis, mucronatis, extra tomentosus, intra glabris; antheris oblongis, versatilibus, quam filamentos brevioribus; fructis maturis ovati-vel lati-oblongis, glabris praeter annulum hirsutum densum ad apicem.

A small virgate shrub 2-4 feet high, the young branches and inflorescence covered with a close, hoary, ferruginous, floccose tomentum, the old branches quite glabrous. Leaves alternate, petiolate, erect and rigid, linear-oblong, very obtuse, thick, canaliculate, smooth and shining above, flocculent beneath, the midrib obscure, the margins strongly revolute, 2-5 cm. long, 3 mm. broad; petioles compressed, 3 mm. long. Inflorescence terminal and in the upper axils, the whole rarely exceeding 6 cm. long; umbels of 3-14 shortly pedicellate flowers, buds shortly clavate, and like the thick pedicels, densely floccose. Calyx teeth prominent. Petals 5, reflexed, densely floccose, glabrous within, one-nerved, mucronulate; stamens 5; filaments filiform, pilose; anthers oblong, versatile, shorter than the filaments; styles slightly protruding, rather thick, with more or less incurved stigmas. Ripe fruit compressed, ovate to broadly oblong, somewhat thick and venulose, glabrous, except for a dense floccose ring at the top.

Range.—Only known at present between Warrah Trig. and Woy Woy, on the northern portion of Broken Bay. D. W. C. Shiress and W. F. Blakely.

Affinities.—*A. crassifolia* is closely allied to *A. ledifolia* DC., and the characters which separate it from that species are the thick, rigid, linear, strongly revolute, very obtuse leaves, shorter inflorescence, longer points to the calyx, and differently shaped fruits.

From *A. linearis* A. Cunn., it is distinguished by its broader and shorter, smooth, obtuse leaves, longer calyx points, and longer and more oblong fruit.

Compositae.

OLEARIA STILWELLÆ, n. sp.

Fruticulus 3-6 dm. altus, radicibus carnosus crassisque; caulibus erectis, pedunculis et caulibus juvenilibus capillorum bifurcatorum vel simplicium tomento incano vel rufo vestitis; foliis alternis, petiolatis, angusti-vel lati-oblongis, nonnumquam obtusi-lanceolatis, minute denticulatis, supra fusciviridibus

glabrisque, subtus tomentosus, 4-11 cm. longis, 2-3.5 cm. latis; capitulis mediocriter magnis, solitariis, axillaribus, pedunculis 10-19 cm. longis; involucris turbinatis 2 cm. longis; bracteis imbricatis acuminatis extra semiglabris; bracteis interioribus scariosis discum excurrentibus; radiis ligulis albis vel coerulis 15-18 mm. longis; floribus disci numerosis; corolla glabra 10 mm. longa; acheniis linearibus sericeo-tomentosis, 5 mm. longis; setis pappi numerosis, barbellatis, inaequalibus.

A dwarf herbaceous shrub, with thick, fleshy roots and erect stems 1-2 feet high, the young stems and pedicels, and under side of the leaves clothed with a dense, hoary or reddish, silky tomentum, consisting of simple and bifurcate, silky hairs. Leaves alternate, petiolate, narrow to broad oblong, or obtusely lanceolate, minutely denticulate, the denticulations erect and asperate, dark green and glabrous above, silky-tomentose beneath, 4-11 cm. long, 2-3.5 cm. broad; venation distinct, channelled above, prominent beneath; petiole terete or nearly so, canaliculate, 5-20 mm. long. Flower heads moderately large, on axillary peduncles 10-19 cm. long, with two or three small floral leaves along them.

Involucres turbinate, 2 cm. broad at the top; bracts imbricate, acuminate, semiglabrous on the back, the inner ones scariosus, exceeding the disc; the outer ones thick and of the same colour and vestiture as the peduncles. Ray florets 10-12, the ligular pale blue or white, 15-18 mm. long; disc florets more numerous, the corolla glabrous, 10 mm. long; anthers of the disc florets acute at the base, terminating in long, protruding points; style lobes long, minutely glandular, compressed-acuminate, flexuose. Achenes linear, silky-hairy and slightly striate, 5 mm. long. Pappus bristles barbellate, unequal, the inner ones exceeding the outer ones.

Named in honour of Miss Sylvia Stilwell, who with Mr. D. W. C. Shires discovered this beautiful species at Nana Glen, 35 miles south of South Grafton.

O. Stilwellae belongs to section *Dicerotriche*, and its thick, fleshy roots seem to distinguish it from all the other species. It is closely allied to *O. pannosa* Hook., from which it differs in the differently shaped, denticulate leaves, much smaller turbinate involucre, pointed anthers, more highly coloured tomentum, and in the fleshy roots.

From *O. grandiflora* Hook., it is distinguished by its narrower and minutely denticulate leaves, different venation, smaller involucre, and acuminate bracts.